LIGHT WINES and BEER

AN EXAMINATION OF THE CLAIMS OF BREWERS AND LIQUOR PUBLICITY AGENTS THAT THESE BEVERAGES ARE PROMOTIVE OF "TRUE TEMPERANCE"

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INTRODUCTION

Driven into their last ditch by the persistent bombardment and assaults of the Prohibition forces in America, brewery publicity writers and the Hearst papers have forsaken the defense of distilled liquors and are making their last stand to save "light wines and beer."

In a recent nation-wide proclamation, the United States Brewers' Association confess that beer has been in bad company, and with assumed sincerity they repudiate whisky and gin, brandy and rum, in these words:

> "The true relationship of beer is with light wines and soft drinks, not with hard liquors. . . . Thus our product has been unjustly and improperly linked with those things over which we have no control, that have actually promoted intemperance."

Thus, like a stray puppy looking for a friend, kinship of interest is claimed with light wines and soft drinks, and beer and light wines and soft drinks and beer and light wines are lauded as beverages that promote "true temperance."

Like argument is used by statesmen apologizing for permitting 70,000,000 bushels of grain and other good food materials to be wasted in the making of beer and wines, the fear being expressed that if brewing and wine-making were to cease the country would be placed on a whisky drinking basis alone. The groundlessness of this fear is proved by the fact that all manufacture of distilled liquors has been stopped as a war measure, and the President has been given authority to commandeer all stocks of spirits for use in the manufacture of munitions; not to mention the high prices charged for such liquors making them prohibitory to the average drinker.

For the sake of argument, let us suppose that distilled spirits are no longer an article of commerce. Would "true temperance" prevail, as the brewers claim, with "beer and light wines" as the only intoxicating beverages?

The brewers and Hearst papers would have the people believe that the drunkenness, debauchery, licentiousness, poverty and woe resulting from strong drink are all caused by whisky, rum, brandy

done it sooner if he had not drunk beer, but you'd better take no chances. Christian Feigenspan, Inc."

The Anti-Saloon League of New Jersey, seeing a good opportusity for publicity, immediately inserted another advertisement in which the foregoing was quoted in small type, closing with the following statement in large type:

"Alexander the Great died in a drunken debauch at the age of thirty-three. You had better take no chances.
"Anti-Saloon League of New Jersey."

This come-back advertisement was subsequently quoted as an example of business repartee in such papers as the Outlook, the Literary Digest, the Christian Advocate, and a large number of other papers.

It certainly ought to be unsafe for the brewers to refer to ancient history for examples or illustrations of sobriety. The story of Alexander's downfall is told by Plutarch, and is as follows: "In a carousal he drank all night and the next day and until at length he found a fever coming on. In the rage of his fever and the violence of his thirst, he took a drink of wine which threw him into a frenzy in which he died." It was not distilled spirits that killed Alexander, but ordinary fermented wine.

Another story is told by Plutarch of drunken revelry, in which wine was the instrument of drunkenness. "Alexander invited his friends and officers to supper, and to give life to the carousal, promised that the man who drank the most should be crowned for the victory. Promachus drank four measures of wine (about four quarts) and carried off the crown, but survived it only three days. The rest of the guests drank to such a degree that forty-one of them lost their lives, the weather coming upon them extremely cold during their intoxication."

Plutarch also tells the following story of drunkenness in the Court of Dionysius: "This young prince, it is said, would continue the scenes of intoxication for ninety days without intermission, during which time no sober person was admitted to his court, where all was drunkenness and buffoonery, revelry and riot."

Gibbon tells of the evil effects of wine drinking on young Athalric, the Gothic King of Italy, who at the age of sixteen was consumed by premature intemperance.

The ancients were very well aware of the evil effects of wine drinking and legislated strongly against it. Romulus, the founder of Rome, made the drinking of wine, as well as adultery, a capital crime in women, for he said, "Adultery opens the door to all sorts of crimes, and wine opens the door to adultery."

Homer, the great poet of Greece, said, "Far from me be the gift of Bacchus—pernicious, inflaming wine, that weakens both body and soul."

Socrates is on record as follows: "While the intemperate man inflicts evils upon his friends, he brings far more evil upon himself. Not only to ruin his family, but to bring ruin on his own body and soul is the greatest wrong that any man may commit." Wine, not distilled spirits, was the agent of intemperance that Socrates condemned.

Plutarch records how Cato of Rome, the Censor, was one day pointing to a man who had wasted in drink a paternal estate near the seaside. He pretended to admire him as one who was stronger than the sea itself. "For," he said, "what the sea could not have swallowed without difficulty, this man has taken down with all the ease imaginable."

Pliny was speaking of wine, not of whisky, when he said, "Wine takes away reason, engenders insanity, leads to thousands of crimes and imposes an enormous expense on nations."

There was no whisky, rum or brandy in the days of St. Augustine, yet he wrote of wine, which is now being urged as a "temperance beverage," as follows: "Wine drinking is the mother of all mischief, the root of crimes, the spring of vices, the whirlwind of the brain, the overthrow of the sense, the tempest of the tongue, the ruin of the body, the shame of life, the stain of honesty, and the plague and corruption of the soul."

In Greece, the law of Zaleucus forbidding to the Epizephyrian Locrians the use of wine under the pain of death, except in case if sickness, was certainly a more drastic prohibition law than any of modern times. The inhabitants of Marseilles and Melitus contented themselves with prohibiting it to women. At Rome, in the early ages, young people of liberal contention were not permitted to drink wine until the age of thirty, according to Rollin, but as for women, the use of it was absolutely forbidden to them, and the reason of that prohibition was because intemperance of that kind might induce them to commit the most excessive crimes. Seneca complained bitterly that this custom was almost universally violated, and told of Bacchanalian revelries of both men and women. The Emperor Domitian passed an edict in relation to wine, in which he decreed that no more vines should be planted in Italy, and that in the provinces at least one-half the vines should be rooted up to make more room for grain.

Gibbon speaks of the ancient Germans, that they had devised a method of making strong beer which they extracted "with very

little art from wheat and barley, and corrupted (as it is strongly expressed by Tacitus) into a certain semblance of wine, which was sufficient for the gross purposes of German debauchery." In chapter 95, page 271, of Gibbon's Rome, he stated that "among the ancient Germans many imagined a gross paradise of immortal drunkenness." Of course, this drunkenness would be the result of beer drinking, as the ancient Germans knew nothing of distilled spirits and had no wine.

The Spartans inculcated habits of frugality and temperance, for which they were distinguished from other nations. Plato observes "That salutary custom had banished from Sparta and all the territory dependent upon it, drunkenness, debauchery and all the disorders that ensue from them, insomuch that it was a crime punishable by law to drink wine to excess even in the Bacchanalia, which everywhere else were days of license, and on which whole cities gave themselves up to the last excesses."

These illustrations might be multiplied, but are surely sufficient to demonstrate that the claims made by the brewers and the Hearst papers, that wine and beer are temperance beverages, have no basis in human experience or human history.

Will history repeat itself, or is modern human fiber so alcoholized that it cannot be affected by booze less potent than 14 per cent alcohol? For reply, go to the marts of white slavery where victims were betrayed from paths of purity by beer and light wines; or ask a myriad victims of alcohol in lazar houses; inquire of our army of tramps, what started them on the downward way, and the answer will come:

"It was beer, beer, beer!
It was lager brought us here.

"A glass of beer won't hurt you, drink it down,
It will nourish, and will warm you, drink it down.
Thus the downward path was started,
From success and honor parted.

"Now appetite has bound us with his chains;
Now nought of good or purity remains;
Now all of cherished life—
Home, companions, children, wife,
Are swallowed in a flood of lager beer."

CHAPTER IV.

Habit-Forming Drugs

The distinctions between vinous, malt, brewed and distilled liquors are merely matters of degrees, or potency of the poison alcohol that they all contain. All are dilutions, just as laudanum is a dilution of another habit-forming drug, opium. Distilled liquors hold in solution a greater percentage of alcohol than do fermented liquors. Whether the solution contains 50, 25, 15, 10 or 5 per cent poison is a matter of detail. The real question at issue is that no poisonous drug in any degree should be sold as a beverage or for general consumption.

The prohibitionist as a good citizen contends that all habit-forming drugs should be under governmental control. Both federal and state laws have so ordered in cases of dangerous alkaloids and narcotics, which cannot be lawfully possessed or sold except for medicinal purposes, and upon the prescription of educated and licensed physicians, and dispensed by educated and licensed pharmacists. Next to alcohol the most widely used drug is opium; and government very strenuously guards against its indiscriminate use and sale, either in its natural condition, its dilution, laudanum, or its derivatives—morphine, heroin, codeine, narceine, narcotine, or papavarine. These restrictions cause discomfort and annoyance to multitudes of drug addicts who believe the laws to be an interference with their personal liberty, but public opinion sustains the paternalism.

Alcohol a Habit-Forming Drug

Alcohol, the active agent in all manner of intoxicating beverages, is a dangerous poison and is so condemned by the highest of medical authorities. Sir Lauder Brunton, in his classical work on Materia Medica, says, "Alcohol is a nerve cell paralyzant, paralyzing the nerve cells in the inverse order of their development." This has never been disputed.

As a result of an investigation by a committee of the British Parliament on the physical deterioration of the men of England, the city governments posted a bulletin as a warning to the young men of Great Britain, in which they said, "The continued use of alcohol, whether in the form of beer or wine or spirits, even though not to the extent of drunkenness, often leads to chronic poisoning."

The International Convention of Alienists and Neurologists, in July, 1914, adopted resolutions strongly denouncing the use of alcoholic beverages and unqualifiedly condemning such use and recommending that the various State Legislatures take steps to eliminate their use. In their statements these scientists said: "In the opinion

of alienists and neurologists of the United States, in convention assembled, it has been definitely established that alcohol when taken into the system acts as a definite poison to the brain and other tissues, and that the effects of this poison are directly or indirectly responsible for a large proportion of the insane, epileptic, feeble-minded and other forms of mental, moral and physical degeneracy."

Scientists assembled at the International Conference on Alcoholism in London, in 1909, gave the following definition of alcohol: "Exact laboratory, clinical and pathological research has demonstrated that alcohol is a dehydrating, protoplasmic poison, and its use as a beverage is destructive and degenerating to the human organism. Its effects upon the cells and tissues of the body are depressive, narcotic and anaesthetic; therefore, therapeutically, its use should be limited and restricted in the same way as the use of other poisonous drugs."

The question for government to decide is, therefore, not one of the quantity of the drug in the solution, but as to the indiscriminate sale of the drug itself in any of its dilutions. The present system permits uneducated men to dispense the drug without medical advice to any buyer, so long as he is able to stand up against the paralyzing influence of the narcotic poison. There can be no temperance beverage that contains alcohol, and an average beer drinker will consume as much alcohol as an average whisky drinker—the difference being that he consumes more water in doing so unless it be that the whisky drinker absorbs his alcohol in the form of high-balls, which would just about balance in proportions of alcohol and water with the beer drinker.

CHAPTER V.

"Light" Wines a Myth

Why, in speaking of wines, do the liquor publicists almost invariably use the adjective "light?" There are wines and wines, but judged by alcoholic content, there is none in our market that deserves to be termed "light."

Ordinary table claret contains alcohol to the extent of 8 to 12 per cent, and is as "heavy" as Burton's ale. Other wines run as high as 25 per cent alcohol, and a wine glassful has the intoxicating power of half the quantity of an ordinary glass of whisky. The following table of alcoholic potency of popular wines is copied from the New International Enclycopedia:

Cider	5 to 9 per cent
Claret	8 to 12 per cent
Hock	10 to 12 per cent

Burgundy	10 to 13 per cent
Champagne	10 to 13 per cent
Madeira	15 to 20 per cent
Sherry	15 to 20 per cent
Port	15 to 25 per cent

Rotten Grape Juice

"Wine is a mocker" in more ways than one. Social usage, advertising, literature and romance have surrounded the wine-cup with a charm that is chiefly sham, for, with all this camouflage rushed away, wine is rotten grape juice—nothing more, nothing less. If a connoisseur wishes to "look upon the wine when it is red, when it giveth its color within the cup," he permits the grapes to partially decay before pressing, so that the pigments next to the skin may be released. Thus he gets the color and thick "body" of a rich Port wine, or the ruby red of a prized Claret. For a white wine, the juice is pressed before decay, in other words, fermentation sets in. Would he have sparkling effervescent champagne, "extra dry?" After the fermentation is completed sugar is added, and the transformation of this sugar into alcohol and carbon dioxide continues in the sealed bottles, resulting in the "pop" when the cork is drawn, and the bubbles as the gas from the fermented sugar comes to the surface. For this "pop" and the bubbles the fellows who love to pose as "spenders" pay two to four dollars extra per bottle, according to the label.

Dangerous Sweet Wines

Sweet wines are the most deceptive and therefore the more dangerous. All sweet wines are highly fortified with brandy. In their manufacture a grape with heavy sugar content is used. In the process of fermentation the yeast germ destroys the sugar, transforming it into alcohol and carbon dioxide. For a "dry" wine this process continues until all the sugar is consumed, but for a sweet wine, brandy is added at an early stage, thus checking the fermentation, which cannot go on because alcohol destroys its own "mother," the yeast germ, at 14 per cent. The result is a sweet wine, or "ladies' wine," that will speedily set silly tongues to babbling.

Where are the traditional "light wines" to be found? In wine countries a cheap wine, "vin ordinairie," is made which workmen and peasantry consume in quantities. The process consists of mixing sugar and water with the pomace remaining after grapes are pressed, and fermenting this compound. The resulting "wine" is an acrid liquid containing very little alcohol, because of economy of sugar, and nearly akin to vinegar.

CHAPTER VI.

Adulterations and Sham Liquors and Wines

A very large proportion of the wines and liquors consumed in this country are adulterations or are sham productions. It is an admitted fact that most of the whisky consumed is blended or rectified goods, made by the blending and combining of ethyl alcohol with water, caramel as coloring, prune juice and other flavorings. These facts were brought out in the investigations before President Taft on the question of "What is whisky," and evidence given by chemists and distillers at that hearing showed clearly that, with the basis of crude alcohol, whisky, gin, rum, brandy and wine could be made, the only difference being the proportion of water and different colorings and flavorings used. The consensus of this discussion was summed up very concisely by the Hon. Joseph H. Choate in these words:

> "All of this controversy turns upon a very trifling item of ingredients of the article called, or claimed to be called whisky, the world over, less than one-half of one per cent of the whole material. All the rest of every kind of product of whisky, or so-called whisky, or claimed whisky, is alcohol and water; 99½ per cent, 99¾ per cent, 99⅞ per cent is of this character—alcohol and water. Let me call attention now to what I think my friends on the other side will agree is the undisputed evidence in the matter. There is no standard of straight whisky. It is agreed that this one-half or one-fourth of one per cent, or whatever it is that they claim makes the distinction between straight whisky and everything else, is rank poison."—Page 1,288 of Official Report.

The investigation showed Duffy's Malt whisky to be practically the same as other whiskies, excepting that one is advertised as a beverage and the other as medicine. When questioning Mr. Armstrong, the attorney for the Duffy whisky, the President said:

"It is intoxicating, I suppose?"

Mr. Armstrong—"It certainly is intoxicating if the doses prescribed upon the bottle are violated."—Page 1,296.

Professor Chandler, considered a most expert chemist, with a record of eight years at Union College and 44 years at Columbia, testified that there is practically no difference, excepting the flavoring and coloring matter, between whisky, brandy and rum, and in answer to a question, "To what is the characteristic flavoring of most whiskies due?" he answered, "To the tar that comes out of the charred barrel."—Page 1,003.

W. S. Johnson, Pittsburgh distiller, testified that his house

made a great variety of liquors by using neutral spirits, diluting them with water, adding caramel as coloring matter, bourbon oil to obtain the flavoring of bourbon whisky, brandy oil for brandy, rum oil for rum, and that this was the practice in making the greater amount of so-called spirits sold to the trade.—Page 663.

Sham Wines

The writer has in his possession a book issued for use of the liquor trade, containing recipes for making brandies, whiskies, porters, gins, cocktails, wines, etc. Following are some of the ingredients, the proportions being withheld for obvious reasons. "Port wine" is made of a mixture of port wine ether, aromatic tincture, tincture of rhatany, tincture of orris, simple syrup, rectified spirits, wine coloring, plain or raisin wine or fermented cider.

To improve the above, add imported port wine. Instead of wine coloring, either elderberry, cherry or huckleberry juice can be used, wholly or in part.

"Sparkling champagne" is made from light white wine, simple syrup, rectified spirits. Then we are told to "mix properly and fill into bottles. Add to each bottle, crystallized citric acid, crystallized bicarbonate of potassa. Cork immediately and tie over."

"Burgundy wine" is produced by mixing white wine, cherry juice, crushed raisins, sugar, crude tartar and unfermented cider.

The process of mixing is then described as follows:

"Put into ten gallon keg, and fill it with plain white wine. Nail a piece of linen over the bung, and let it ferment at 65 to 70 Fahrenheit. When the evolution of gas has nearly ceased, bung the keg tightly and put it into the cellar. Draw off after two months and strain through flannel. Fill it into another keg up to the bung, and leave it until cleared, when it is to be bottled."

"Imitation of Rhine wine" is made of simple syrup, fruit acid, tannic acid, sulphate of soda and clear water—nearly all water. We are then told to "percolate through a wooden vessel filled with shavings which have been washed until they are tasteless. Maintain a moderately warm temperature. Let the liquid flow through the shavings repeatedly until it commences to ferment. When it has arrived at the proper state, add rectified spirits. For "red wine" color with huckleberry juice or wine coloring."

These are old recipes. Modern science can make sham wines and liquors with much greater economy.

Vance Thompson, in his powerful and entertaining book, "Drink and Be Sober," handles this question of sham and adulterated wines and liquors very drastically. We quote from his book as follows:

"At an investigation held recently at Albany, by the state authorities of New York, a chemist (a great man—I know him; he is my friend) showed the commission the 'tricks of the trade.' The distillers and their experts and tasters and lobbyists were sent into an outer room. Then the chemist filled a score of glasses with wood alcohol (the commissioners looked on). In each glass he dropped different chemicals, making for color and odor and flavor. The expert whisky men were called in. Their tasters took up the glasses, one after the other; and they said: 'This is gin—this is Holland—this is rye whisky, three years old—this is new Bourbon whisky—this is rum—this is brandy, five years in the cask—this is Scotch or Irish,' and so on. . . .

"I know a wine-forger who, among his friends, makes no secret of his business. 'Give me good water,' he used to say, 'and I will turn you out a bottle of any kind of wine you like to name—while you wait.'

"A dispensing chemist could not make up prescriptions more quickly than he manufactured his 'wines.' With a gill of cheap California wine, water, a few drops of vinegar and 25 per cent of potato-alcohol, he will make you a quart of 'claret' while you stand at his elbow. If you want a Hock or Sauterne, he takes a little real sherry as a base, adds a little citric acid, an astringent, like tannic acid, to dry it, spirit and water in proportion, and there you are. Substitute white sugar syrup for the tannic acid and you have a 'Chablis,' and to 'age' it, add a little glycerine or glucose.

"What will you have?"

"Here's a brandy made of silent spirit and oenanthic ether, colored and sweetened with caramel—wood alcohol as a basis. An old dry champagne? Chemicals with a little aerated water added to the potato spirit.

"And what will you top off with?

"Your forger ranges his bottles of benzoic acid, benzoic ether, acetic acid and ether, oenanthic ether and glycerine or glucose; a drop or two of each—then fills up the glass with wood or potato alcohol and lo, it is Maraschino! Do you prefer Kirchwasser? A drop or two of cochineal will 'do the trick.' . . . .

"I say it is doubtful if you can buy a glass of pure beer in any American saloon—or drink it at any brewery.

"There are nineteen hop substitutes; there are fifteen malt substitutes; so the brewer has his choice. And what

does he not choose? Aloes to give the bitter taste, soapstone for frothiness, catechu for astringency. . . . .

"A few years ago the advocates of pure food—and drink—tried to get through the Legislature at Albany a law compelling the brewers to hold their beer in lager for three months. What happened? The brewers rose, screaming with beer-hysteria; armed with clubs and financial sandbags, they slew the bill. Why? What was their objection to the measure? In France, in England, in Germany, beer must (so runs the law) be lagered—that is, it must be stored, for three months. There is no objection to the law there, because the brewers are occupied in the relatively honest business of making beer out of malt and hops. In this country—in the ordinarily careless way in which they are permitted to make beer, without any supervision or standard—in this country, I repeat, the ferment the brewers use is accompanied by a large amount of other bacteria, which set up putrefactive fermentation in the organic matter accompanying the starches—and even in the starches themselves. Do you see the point? The ferment is not inspected and it is always—not occasionally—impure. As a result, the beer ferments putrefactively. These putrefactive changes go steadily on. In order to overcome them, the brewers add what they are pleased to call 'preservatives.' These 'preservatives' range all the way from arsenious acid, or what is known as white arsenic (a deadly poison), to salicylic acid, which causes many pathological injuries when used over a period of time, attacking notably the kidneys and irritating the liver."

CHAPTER VII.

What Is Beer?

With slight variations the all malt beverages are made by the same general process. Ale was the name for brewed liquor in England prior to 1524, when hops were first introduced from Germany, and the German term, **bier,** was used to distinguish the unhopped liquor. Modern ale contains hops and a greater amount of alcohol than beer. In making ale the fermentation in the vats is checked, leaving much of the sugar in solution, which decomposes later in the barrels. "Mild" ale remains in the barrel for about one week, "pale" ale for two to four months, and "strong" ale from ten to fifteen months.

Porter is a brew made to take the place of a mixture of ale, beer and "twopenny," as "half and half" was a mixture of ale and

"twopenny" brews. It gets its color from some of the malt being roasted brown. The name comes from its patrons, the porters who favored it as a strong heavy drink.

Stout is still stronger than porter, and is made chiefly in Ireland.

When all is said and done, with the alcohol removed from any malt liquor, what remains is water, some coloring matter and debris of fermentation, valueless as food, and obnoxious to every sense.

What Malt Is

Theoretically these malt liquors are obtained from barley malt with an infusion of hops to give a better taste, but modern brewing has gone very far afield from these methods. The process of producing beer from barley is, first of all, to transform the barley into malt. Barley is a very hard grain, consisting chiefly of insoluble starch surrounding a germ. In the preparation of malt the barley is first soaked in water to start the process of germination, and in this process the insoluble starch is transformed into sugar, commonly known as grape-sugar, or glucose, the purpose of nature doubtless being to thus provide a soluble food upon which the germ can feed. The next process is to dry the malt by subjecting the saturated grains to a low heat which kills the germs and yet retains the sugar. The resulting product is malt, which consists of the barley with the starch transformed into sugar, and which has in itself nourishing food qualities.

The next process is to crush the malt and extract the contents of the husks by the use of hot water, and these grains are given a later careful treatment of water to obtain as large a portion of soluble matter as possible. The resulting liquid, consisting of water and the extract of the malted grains, is known as wort. To this material hops are added in order to give a better flavor, and in a sense act as a preservative.

Fermentation Destroys Food Value

The next process after cooling is fermentation, yeast being added to the wort to secure this process. Fermentation is a process of decomposition and the yeast germ, feeding upon the sugar, transforms it into carbonic acid gas and alcohol, the alcohol being an excretion of the yeast germ. The carbonic acid gas causes the working process of the fermentation and passes off in the atmosphere, the alcohol remaining in the liquid.

The beer is then placed in vats that it may properly age and undergo after-fermentation and ripening. This process in Ger-

many is termed putting it in lager, from which the name lager beer is derived.

Finally it is filtered and placed in barrels or bottles.

In the Brewers' Year Book of 1914 in a special article by Prof. Charles F. Chandler, of Columbia University, the process of brewing is summarized in these words:

> "To summarize, I would say that beer is a beverage in the preparation of which malted barley, rarely malted wheat, rice and corn, or its products, are used. The malt is extracted with hot water, an addition of hops is made, it is boiled and the solution constitutes the wort. The wort is cooled, the yeast is added, and the whole fermented to a finish. The sugar is split into alcohol and carbonic acid gas, a little free acid, glycerine and aromatic bodies in small quantities result. The product is beer."

The foregoing is the process of making honest beer, but modern brewing has changed this process very materially. Many other materials are used besides malted barley. Rice and large quantities of glucose obtained from corn are common ingredients. The process of storing for long periods for "ripening" has been changed to more economical methods by use of chemicals.

Hops Contain Lupulin—a Dangerous Narcotic Drug

Brewers' advertisements give considerable publicity to the idea of the alleged medical value of hops in the beer. As a matter of fact, beer was brewed for centuries without the use of hops, and when first introduced in England the people petitioned the King against their use, saying "this wicked weed would spoil the drink and endanger the lives of the people." If there is any medical tonic value in the use of the extract of hops, it goes without saying that the prescription of the tonic ought not to be made by a bartender, but ought to come from a licensed physician and be compounded by an educated and licensed pharmacist.

Those Englishmen who feared the "wicked weed" were wiser than they knew. The hop belongs to the hemp family, from which hasheesh is obtained, a most virulent narcotic drug, used especially in the Malay Archipelago, famous for causing natives to "run amuck." The lupulin glands of hops contain the same alkaloids and bitter tasting resins, which exert the same effect on the human body as does hasheesh—differing only in degree. This accounts also for the varnished kidneys of so many beer drinkers.

The following quotation from Dr. Edwin F. Bowers' book, "Alcohol, Its Influence on Mind and Body," is illuminating on the question of the value of the extract of hops as a beverage:

"Professor Reinitzer, of the Polytechnic at Graz, has demonstrated that it is due to the preservative action of the hop resins that it is possible to 'keep' beer. The bacterial life-forms in beer (the sarcina organisms) are hindered from multiplying by the resins contained in the hops. This assists the alcohol in preventing undue fermentation. So the internal organs of a beer drinker undergo a double process of pickling, which makes him just about 50 per cent worse off than he would be if he confined himself exclusively to alcohol.

"Here we have rational and scientific explanations as to why excessive beer drinking is accompanied by that stupidity and clumsy heaviness of mind peculiar to those who indulge unwisely and unwell in the beverage that anathematized Gambrinus. That vivacity and brilliance of wit which enable the Munich beer drinker, for instance, to stare stupidly into his beer mug for an hour at a time, are typical symptoms of hemp poisoning plus alcoholism. And either alone is bad enough—in all conscience."

Substitutes and Adulterations

An investigation made in Great Britain in 1899 before the departmental committee on beer materials, as shown in the official report, gives a long list of materials used in brewing which are given below in classified groups:

Malt and Its Substitutes

Malt, corn, unmalted corn, raw grain, grain (other), maize, maize (flaked), maize (gelatinized), maizone, cerealine, sago (ground), torrefied malt, Duttson's malt flour, Beane's grist, Shepherd's corn malt, rice, rice shells, rice flaked, rice gelatinized, rice desiccated, rizine, sugar, saccharum, glucose, glucose from sago, glucose from raw grain, glucose from maize, glucose from potato starch, glucose and gelatine, glucosine, molasses, raw sugar, cane sugar, honey, viscosoline, dextrine, malto-dextrine, black malt sugar, saccharin. Saccharine (coal-tar product) is not allowed; it is strictly forbidden.

Hops and Its Substitutes

Hops, quassia, Colombo root, camomiles, hop substitutes.

Chemicals

Vitriol, salt, bisulphate of lime, salicylic acid, magnesia, tannin, sulphuric acid, chalk.

Coloring Matters

Coloring, caramel, caramelized dextro-maltose, dextrinous caramel.

Clarifying Matters

Finings, isinglass, fishy matter (sole skins).

Sundry and Stimulating

Licorice, grains of paradise, guinea pepper, cocculus indicus. Cocculus indicus is also not permitted to be used.

In the bottling of beer and ale, in order to preserve the contents, it is a common practice to use salicylic acid. The report of the Massachusetts Board of Health, 1894, refers to this practice in the following language: "It appears to be a common custom to preserve ale and beer by the addition of salicylic acid. The use of this drug for this purpose is everywhere recognized as harmful and unjustifiable."

There is no justification in describing beer or ale as malt extract, as after going through the process of fermentation the only qualities of the malt that remain are some mineral matter and extracts that are insoluble and resist the decomposing influence of the yeast germ, the only other material—the sugar—having been, by the decaying process, transformed into alcohol and carbonic acid gas. The only genuine extract of malt is a material that is described as malt tea, which contains in liquid form the food value of malt, but in beer and ale most of the sugar, practically the only food material, has been transformed into poison, which neutralizes any trifling food value in the malt solution remaining after fermentation.

The analysis of beer as given in Horsley and Sturge's "Alcohol and the Human Body," is as follows:

Water	90 per cent
Albumen	0.5 per cent
Sugar	1.5 per cent
Mineral	0.4 per cent
Extractive	3.1 per cent
Alcohol	4.5 per cent
	100

An analysis made by the North Public Health Bureau of New York city for the New Jersey Anti-Saloon League of a bottle of Anheuser-Busch Budweiser lager beer showed the alcohol content to be 4.80 per cent.

Such is the beverage that a conspiracy of brewers and newspapers in America advertise so widely as "liquid bread"—90 per cent water, 5 per cent poison and the balance insoluble salts and extractives of practically no food value.

CHAPTER VIII.

Drunkenness in Beer and Wine Countries

A popular fallacy, based upon misrepresentation, is the belief that drunkenness is rare in nations that drink great quantities of beer and wine, such as Germany and France. Another fallacy is that where the use of these fermented beverages is encouraged there is very little consumption of distilled spirits.

Official reports of the per capita consumption of wine, beer and distilled spirits in different countries of the world, covering the year 1913, show the following:

Country.	Wine (Gallons)	Beer (Gallons)	Spirits (Gallons)
United States	.56	20.62	1.50
England	.50	38.	1.50
France	26.2	8.	2.50
Germany	1.75	31.	1.75

As will be seen from the above tabulation, the wine producing countries of France and Germany, each consumed more distilled spirits per capita than the United States; and in France more wine was consumed per capita than beer in the United States, and in Germany 50 per cent more beer was consumed per capita than in the United States, so that the per capita consumption of pure alcohol in these beer and wine countries was very much greater than in the United States.

Alcoholism a Menace to France

Before the war, alcoholism had become a greater menace to France, the home of "light wines," than was Germany. Speaking on this subject in Sorbonne, January 3, 1910, M. Joseph Reinach, a member of the French House of Deputies, said:

> "We have become the most drunken nation on earth, and that, gentlemen, in thirty years. The number of drink-shops has reached the frightful figure of 477,000, one for every thirty adults. In many of our great cities and seaport towns the number of drinking places has, since 1880, doubled, nearly tripled. In hundreds of villages, one counts a saloon for every tenth, nay, every fourth or third house. And in spite of this supersaturation, the increase continues. More than six new saloons are on the average opened each day. **Since 1880 our consumption of absolute alcohol has doubled, in some provinces sextupled.** And the consequences of this immense poisoning—who does not know them? They are written in the flesh of the nation. Ask at the Ministry of

Justice for the statistics of criminality; at the Ministry of the Interior for those of madness, of suicide, of tuberculosis; at the Ministry of War for the conscript lists. In ten departments the number of rejected conscripts has risen from 6 per cent to 20 per cent. In all France the number of suicides has doubled, of insane has advanced by a continual progression from 47,000 to 70,000. More than half the crimes against persons are committed by alcoholists."

Italy's Drunken School Children

Italy, another "light wine" country, is far from immune from the evils of drunkenness. The Societa Umanitaria of Milan has recently published a little volume, the very name of which is suggestive, "Alcolisimo e un pericolo per Italia" (Alcoholism Italy's Great Danger). In that book we are told that investigations were made among 36,000 school children of Milan; and of the boys, 25 per cent admitted having been drunk on more tha none occasion, while 11 per cent of the girls made the same confession.

The Milan prosecutor says: "It falls to my lot frequently to have to sum up the causes of a tragedy in two words—wine and knife." From Parma comes the warning, "The increase in wages and the cheapness of wine have led to a growth of drunkenness."

Insanity, too, is on the increase. Wine alcoholism is shown to be responsible for a large part of it.

The Alcohol Blight in Germany

In Germany the alcohol problem was very acute before the war and was sapping the vitality of the nation, and over 400 university professors and men of science united in a great anti-alcohol protest. Dr. Emil Muensterberg (brother of the late Prof. Muensterberg of Harvard, who not long ago sounded the praises of beer to the American public) recently said: "The consumption of alcohol in Germany is very great. . . . Fifty thousand insane are in German asylums yearly whose sickness can be traced to alcohol."

The Kaiser, with an eye to military efficiency, urged his embryo officers to join the Good Templars, a total abstinence organization. Dr. Matthaei, a staff physician of the German army, denounces all kinds of alcoholic beverages in the following strong language:

> "We should not discuss moderation with a man. The thing has long since been settled by science. The use of narcotic poisons is simply indecent and criminal."

A short time before the present war, the German Minister of War distributed among the army thousands of copies of a pamphlet

entitled "Alkohol and Wehrkraft." It is a terrific arraignment of beer drinking. Here are a few of his most telling sentences:

> "Many do not suspect what a destructive poison they are taking into themselves. . . . What devastation this poison has caused among the German people, and still causes. . . . Pure alcohol is undoubtedly considered a poison. . . . Alcohol disturbs the digestion, causes pathological fatty growth and distinct changes in brain, liver and heart. There is no justification for calling beer 'liquid bread.' A glass of heavy beer costing 25 pf. has no more nourishment than a piece of cheese costing one pf. . . . Almost all the excesses during leaves of absence, fighting and disturbance of public order are to be traced back to drink. . . . We must speak plainly. It is mostly beer which causes so much mischief. . . . This is not the harmless drink which many suppose it to be."

Americans who have visited German beer gardens where families sit about tables and sip their beer have returned with superficial views of the temperate German people. They saw only the surface. They did not visit the 800 Animierkneipen or beer dives in Berlin, which employ 1,786 "waitresses," of whom Dr. Muensterberg says, "Thousands of fresh young women go to destruction in a short time and are rarely to be rescued." Speaking of these places, Gonser, a prominent student of sociology, has declared that "beside them a brothel is a moral institution." They did not visit the Munich Octoberfest, a beer fest, where, according to Der Abstinente Arbeiter (Nov. 22, 1912), on the last Sunday in a single beer booth, the Brawrozi, no less than 48 persons were wounded, among them two policemen; and during the "fest" 363 cases of wounds and 143 of sudden sickness, of whom 116 were women, were given in charge to the sanitary corps.

The barbarism exhibited by Germans in the great world war might be an echo of the prophecy of Dr. Edward von Hartman, one of Germany's most profound philosophers: "The civilization of the twentieth century threatens, in consequence of the drenching in drink, to sink again into barbarism and degeneracy." Commenting on this, Ernest Gordon in his great work, "The Anti-Alcohol Movement in Europe," says:

> "The facts justify his opinion. From 1877 to 1901, twenty-five years, the number taken for drunkenness to the hospitals and insane asylums of Germany increased fivefold, and for delirium tremens threefold, although the population had increased but one-third. The number of hospital patients for heart-sickness in this period rose from 15,012 to

84,071—five and one-half-fold, and the relation between beer drinking and heart failure is unquestioned. Professor von Gruber tells us that one-half of the German city school children are sick and weakly; that a bare 50 per cent of the young men in German cities are able to do military service; that a large percentage of the young women cannot nurse their children. Professor Gravitz of Charlottenburg finds alcoholic disturbance in 34 per cent of all his male patients over thirty years. 'Alcoholism,' he says, 'is undoubtedly the most important and commonest form of poisoning;' and Professor Dr. Stadelmann in the 1905 report of the Friedrichshain Hospital, Berlin, continues: 'Our people suffer more in health and economic power from schnaps than from tuberculosis, against which fight has been long successfully waged.'"

And German brewers in America would make Americans believe that beer is a "temperance beverage."

Whisky, gin, rum, brandy, wine, beer, ale, porter and stout—they have been boon companions for 800 years, particeps crimines before the courts of law, and now that the Court of Public Opinion has outlawed them—in death they should not be separated.